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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,897	09/30/2003	Donald L. Kuehne	T-6258	8059
34014	7590	05/05/2004	EXAMINER	
CHEVRON TEXACO CORPORATION			NGUYEN, TAM M	
P.O. BOX 6006			ART UNIT	
SAN RAMON, CA 94583-0806			PAPER NUMBER	
			1764	
DATE MAILED: 05/05/2004				

Please find below and/or attached an Office communication concerning this application or proceeding..

Office Action Summary

Application No.

10/676,897

Applicant(s)

KUEHNE ET AL.

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/30/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8-11, 13-15, 17, 18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Reynolds et al. (4,988,433).

Reynolds discloses a process for removing metals such as calcium from a hydrocarbon feed (e.g., vacuum residuum). The feed is contacted with an extraction solution which comprises acetate ion (acetic acid) in the presence of alkaline material (e.g., ammonium hydroxide). The process is operated at a temperature of about 250° F (121° C) and the residence time is about a few seconds to about 4 hours. The acetate ion has a pH greater than 2 (e.g., 5) and the extraction solution contains at least 2 moles of acetate ion per mole of calcium. More than 60 percent by weight of calcium (e.g., 83%) is removed from the feed. It is estimated that there is at least 2 part by weight of extraction solution per 100 parts by weight of feed (75 g of feed is mixed with 75 g of aqueous solution). The feed contains 54 ppm of Ca and a demulsifier is also added into the feed/solution mixture. A calcium enriched aqueous mixture is separated from feed. (See col. 2, line 53 through col. 3, line 29; col. 4, lines 1-35, col. 4, lines 57 through col. 5, line 30)

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 7, 12, 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds et al. (4,988,433).

The process of Reynolds is as discussed above.

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Regarding claims 6, 7, 19 and 20, Reynolds does not specifically disclose that the pH is in the range of between 3.5 and 4.7 or 3.5 and 4.6. However, Reynolds discloses that the pH is above 2 (see col. 3, lines 16-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Reynolds by using a solution having a pH as claimed because one of skill in the art would use any solution having a pH greater than 2 including 4.

Regarding claim 12, Reynolds does not disclose that the extraction conditions is of from 25° C to 110° C. However, Reynolds is not limited the operating temperature and in one of the example, the operating temperature is 250° F(121° C). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Reynolds by operating the process at a temperature between 25°C and 110° C because it would be expected that the results would be the same or similar when operating the process at the claimed temperature or at 121° C because operating at a lower temperature would require increase in contacting time, but would not affect the removal of calcium.

Regarding claims 16, Reynolds does not disclose that the feed contains greater than 100 ppm calcium. However, Reynolds discloses that any feed contains unacceptably high levels of calcium can be used in the process (see col. 2, line 65-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Reynolds by using a feed containing greater than 100 ppm of calcium because one of skill in the art would employ a feed containing any amount of calcium including the claimed amount and it is reasonable considered that the outcomes would be similar when using a feed which contains 50 or 101 ppm of calcium in the process of Reynolds.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
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TN